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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEE, RICHARD J

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/451,097

Applicant(s)

Watanabe

Examiner

Richard Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/8/02 and 2/26/02
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 5-36 is/are pending in the application.
- 4a) Of the above, claim(s) 5-14 and 19-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 15-18, and 27-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 6) ☐ Other:

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1. Applicant's election with traverse of claims 1-4 and 15-18 drawn to Figures 1-7 in Paper No. 6 is acknowledged. The traversal is on the grounds that the Office Action lacks specific identification of the species as required by MPEP 809.02(a). This is not found persuasive because the brief description of the drawings section of the Specification as shown at pages 7-8 of the Specification clearly identifies at least three embodiments of the present invention.

It is noted that subsequent to the election filed February 8, 2002 (Paper no. 6), the applicant had submitted a preliminary amendment filed February 26, 2002 canceling claims 3 and 4; amending claims 1, 2, 15, and 16; and adding new claims 27-36. After a careful review of the newly added claims, it is found that claims 27-36 should be grouped with the elected embodiment of Figures 1-7. Therefore, claims 1, 2, 15-18, and 27-36 will now be examined while claims 5-14 and 19-26 will be withdrawn from further consideration.

The requirement is still deemed proper and is therefore made FINAL.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "second image retrieval executing unit" as claimed in claim 16, line 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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3. Claims 2, 15-18, 33, and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 2, line 3, "feature" should be changed to "featured" in order to provide proper antecedent basis for the same as specified at lines 4-5;

(2) claim 15, line 10, the particular phrase "for receiving said image data from **outside**" as claimed is vague and indefinite;

(3) claim 16, lines 5-6, the particular phrase "receiving said image data and index information from **outside**" as claimed is vague and indefinite;

(4) claim 16, line 7, the particular phrase "and from **outside**" as claimed is vague and indefinite; and

(5) claim 33, line 6, before "form", "a" should be inserted for clarity.

4. Due to the indefiniteness of claims 15 and 16 as pointed out in the above paragraph, the Examiner wants to point out that these claims will be read in the broadest sense.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 15, 27, 31, 33, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazui et al (5,642,174).

Kazui et al discloses a scene change detecting device as shown in Figures 1-3, 9, and 10, and the same image retrieval information storing apparatus, image retrieving apparatus, and image retrieval information managing apparatus as claimed in claims 1, 15, 27, 31, 33, and 34, comprising the same frame feature value generating unit (11, 12 of Figure 2, see columns 3-4) for generating a frame feature value which is a numerical representation of a frame feature based on image data, the frame feature value generating unit generating the frame feature value based on coding information; a frame value storing unit (13 of Figure 2) for storing the frame feature value corresponding to the image data, the frame value storing unit being connected to the frame feature value generating unit; a coding information reading unit (i.e., within 13 of Figure 2, see columns 3-4) for reading prescribed coding information which is the base for extracting frame feature from the image data which is coded; an index information generating unit (20 of Figure 2, and see Figure 10, column 3, line 65 to column 4, line 14, column 7, lines 56-67) for receiving a frame feature value which is a numerical representation of a frame feature corresponding to a frame of image data, for determining a featured frame among the image data based on the frame feature value in accordance with a request for extracting a featured frame, and for generating index information which is positional information of the featured frame; a first image retrieval executing unit (see User of Figure 2) connected to the index information generating unit, for transmitting the request for extracting a featured frame to the index information generating unit,

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for receiving the index information from the index information generating unit, for receiving the image data from outside, and for outputting a frame specified based on the index information; a coding information reading unit (i.e., within 11 of Figure 2, see columns 3-5) for reading prediction mode information from coded image data; the frame feature value generating unit connected to the coding information reading unit for counting a number of blocks coded in accordance with respective prediction methods for a frame and for outputting a prediction mode frame feature value which is a numerical representation of frame feature (see 11 of Figures 2 and 3, column 4, line 15 to column 5, line 11); a frame feature value storing unit (13 of Figure 2) connected to the frame feature value generating unit for storing the prediction mode frame feature value corresponding to the coded image data; a frame feature value reading unit (i.e., within 20 of Figure 2, see Figure 10, column 3, line 65 to column 4, line 14, column 7, lines 56-67) for reading one or more frame feature values which are numerical representations of frame feature corresponding to one or more frames of image data and which are included in an image retrieval information; a frame feature value managing unit (i.e., User of Figure 2) connected to the frame feature reading unit for managing the frame feature values in a form which can be used for image retrieval; an index information reading unit for reading one or more index information which are positional information of one or more featured frames representing the image data and which are included in the image retrieval information (i.e., windows 22a-22e of Figure 10 represent index information that are being read when selected by the user, see column 7, lines 56-67); and an index information managing unit (i.e., User of Figure 2, see column 3, line 65 to column 4, line

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14, column 7, line 56-67), connected to the index information reading unit for managing the index information in a form that can be used for image retrieval.

7. Claim 35 is rejected under 35 U.S.C. 102(b) as being anticipated by Takashima (5,754,233).

Takashima discloses a compression encoding apparatus and recording apparatus for compression encoded data as shown in Figure 11, and the same image retrieval information managing apparatus as claimed in claim 35, comprising the same frame feature value reading unit (i.e., 103 of Figure 11, and see column 15, lines 7-48) for reading one or more frame feature values which include motion vector frame feature values, based on statistics of motion vectors of image data and which are included in an image retrieval information; and a frame feature value managing unit (i.e., 101 of Figure 11, and see column 15, lines 7-48), connected to the frame feature value reading unit, for managing the frame feature values in a form that can be used for image retrieval.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 2, 16, 28, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazui et al.

Kazui et al discloses substantially the same image retrieval information storing apparatus, image retrieving apparatus, and image retrieval information managing apparatus as above, but does not particularly disclose the followings:

(a) an index information storing unit for storing index information, the index information unit being connected to the index information generating unit as claimed in claims 2, 28, and 32; and

(b) a second image retrieval executing unit connected to the index information generating unit, the second image retrieval unit transmitting the request for extracting a featured frame to the index information generating unit, receiving the index information from the index information generating unit, receiving the image data and index information from outside, and outputting a frame specified based on the index information receiving from the index information generating unit and from outside as claimed in claim 16.

Regarding (a), it is noted that index information generating unit 20 of Figure 2 of Kazui et al provides an output to the storage device, but the disclosure of Kazui is silent as to what is being transferred back to the storage device. However, it is considered obvious that the storage device 13 of Kazui et al may certainly be provided for storing of the index information derived from the index information storing unit. In any event, the Examiner takes Official Notice that the particular use of a storage device for buffering purposes is old and well recognized in the art. Therefore, it

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would have been obvious to one of ordinary skill in the art, having the Kazui et al reference in front of him/her and the general knowledge of storage devices, would have had no difficulty in recognizing that a storage device may obviously be provided for connection with the index information generating unit 20 of Figure 2 of Kazui et al for thereby storing the desired index information purposes as claimed.

Regarding (b), since there exists one user within Kazui et al (see User of Figure 2) for providing the transmission of request, receiving of index information, receiving image data from outside, and for outputting a frame specified based on the index information, a second user (i.e., second image retrieval executing unit claimed) may obviously be provided for accomplishing the same tasks as the first user as disclosed by Kazui et al. Therefore, it would have been obvious to one of ordinary skill in the art, having the Kazui et al reference in front of him/her, would have had no difficulty in providing the second image retrieval executing unit for providing the transmission of request, receiving of index information, receiving image data from outside, and for outputting a frame specified based on the index information in view of the teachings of Kazui et al involving the first image retrieval executing unit performing the same functions for the same well known purposes as claimed.

10. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takashima.

Takashima discloses substantially the same image retrieval information managing apparatus, further comprising substantially the same coding information reading unit (i.e., within 103 of Figure 11) for reading motion vector information from coded image data; and a frame

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feature value generating unit (i.e., within 101 of Figure 11, and see column 15, lines 7-48), connected to the coding information reading unit, for calculating statistics of motion vectors of the coded image data based on the motion vector information, and for generating a motion vector frame feature value which is a numerical representation of frame feature.

Takashima does not particularly disclose, though, a frame feature value storing unit connected to the frame feature value generating unit for storing the motion vector frame feature value corresponding to the coded image data as claimed in claim 29. It is noted that a storage unit 202 is being supplied to store the motion vector data provided by motion estimator 103 of Figure 11 of Takashima, but the storage unit 202 is not particularly connected to the frame feature value generating unit 101 of Takashima. However, it is considered well within one skilled in the art to provide a storage device for buffering data. And in view of the storage device 202 of Takashima, it is considered obvious to provide such similar storage device to be connected to the frame feature value generating unit 101 of Takashima if buffering of data is required. Therefore, it would have been obvious to one of ordinary skill in the art, having the Takashima reference in front of him/her and the general knowledge of memory buffering devices, would have had no difficulty in providing a frame feature value storing unit to be connected to the frame feature value generating unit 101 of Figure 11 of Takashima in view of the memory storage device 202 of Figure 11 of Takashima for the same well known buffering of data for timely processings purposes as claimed.

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11. Claims 30 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashima as applied to claims 29 and 35 in the above paragraphs (7) and (10), and further in view of Kazui et al.

Takashima discloses substantially the same image retrieval information storing apparatus and image retrieval information managing apparatus as above, but does not particularly disclose an index information generating unit for determining a featured frame among the coded image data, and for generating index information which is positional information of the featured frame; an index information storing unit, connected to the index information generating unit, for storing the index information; an index information reading unit for reading one or more index information which are positional information of one or more featured frames representing the image data and which are included in the image retrieval information; and an index information managing unit, connected to the index information reading unit, for managing the index information in a form that can be used for image retrieval as claimed in claims 30 and 36. However, Kazui teaches the conventional use of an index information generating unit (20 of Figure 2, and see Figure 10, column 3, line 65 to column 4, line 14, column 7, lines 56-67) for determining a featured frame among the coded image data, and for generating index information which is positional information of the featured frame; an index information reading unit (i.e., windows 22a-22e of Figure 10 represent index information that are being read when selected by the user, see column 7, lines 56-67) for reading one or more index information which are positional information of one or more featured frames representing the image data and which are

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included in the image retrieval information; and an index information managing unit (i.e., User of Figure 2, see column 3, line 65 to column 4, line 14, column 7, line 56-67), connected to the index information reading unit, for managing the index information in a form that can be used for image retrieval. Regarding the index information storing unit, it is noted that index information generating unit 20 of Figure 2 of Kazui et al provides an output to the storage device, but the disclosure of Kazui is silent as to what is being transferred back to the storage device. However, it is considered obvious that the storage device 13 of Kazui et al may certainly be provided for storing of the index information derived from the index information storing unit. In any event, the Examiner takes Official Notice that the particular use of a storage device for buffering purposes is old and well recognized in the art. Therefore, it would have been obvious to one of ordinary skill in the art, having the Takashima and Kazui et al references in front of him/her and the general knowledge of scene change systems and storage devices, would have had no difficulty in providing the index information generating unit, index information reading unit, and index information managing unit as taught by Kazui et al for the system of Takashima as well as recognizing that a storage device may obviously be provided for connection with the index information generating unit 20 of Figure 2 of Kazui et al for thereby storing the desired index information purposes as claimed.

12. Claims 17 and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Katata et al discloses a motion picture coding and decoding apparatus.

Nagasawa discloses a specially formatted optical disk and method of playback.

Fujiwara et al discloses a motion image coding apparatus adaptively controlling reference frame interval.

Heo et al discloses a device and method for variable length coding of video signals depending on the characteristics.

Ooi discloses a picture coding apparatus.

Ioka et al discloses a picture query system using abstract exemplary motions of a pointing device.

14. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

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or faxed to:

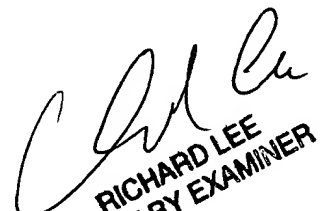
(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

5/15/02

